

RECENT STUDIES IN
THE LEGUMINOUS GENUS *STYLOSANTHES*

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Since publication of the writer's "A revision of the Genus *Stylosanthes*" in 1957, a number of additions and corrections have been brought to my attention. This paper is an effort to incorporate this material into a supplement to the genus *Stylosanthes*.

In "A Revision of the Genus *Stylosanthes*", twenty-five species and one subspecies were recognized. Four additional species are presented in this paper, with one being new to science. Several new localities increasing the geographical ranges of some species are given.

***Stylosanthes biflora* (L.) BSP.** — A further listing by states and counties of this United States species is given. ALABAMA: DeKalb, Lee, Marshall, Mobile, Shelby. ARKANSAS: Baxter, Clark, Craighead, Cross, Dallas, Drew, Franklin, Garland, Hot Springs, Jefferson, Johnson, Lincoln, Logan, Miller, Prairie, Pulaski, Saline, Sharp, Union, Yell. DELAWARE: Newcastle, Sussex. FLORIDA: Columbia, Dade, Duval, Escambia, Hillsborough, Jefferson, Lake, Marion, Putnam, Volusia, Washington, Woodson. GEORGIA: Bulloch, Cobb, DeKalb, Fannin, Gwinnett, Madison, Oconee, Stephens, Union, Whitfield. ILLINOIS: Franklin, Gallatin, Hardin, Jackson, Johnson, Lawrence, Macoupin, Monroe, Peoria, Pope, Randolph, St. Clair, Saline, Union. INDIANA: Clark, Crawford, Daviess, Floyd, Harrison, Knox, Lawrence, Perry, Posey, Spencer, Washington. KANSAS: Cowley, Montgomery. KENTUCKY: Bell, Calloway, Carter, Clinton, Edmonson, Estill, Grayson, Lewis, Logan, Lyon, McCreary, Meade, Nelson, Rockcastle, Wayne, Whitley. LOUISIANA: Rapides Parish. MARYLAND: Frederick, Montgomery. MISSISSIPPI: Harrison, Jackson, Stone. MISSOURI: Barry, Benton, Butler, Callaway, Camden, Cape Girardeau, Cedar, Cole, Crawford, Dade, Dent, Douglas, Dunklin, Franklin, Gasconade, Greene, Henry, Hickory, Howell, Iron, Jasper, Jefferson, Lawrence, Lincoln, McDonald, Maries, Marion, Miller, Newton, Oregon, Pike, Polk, Ralls, Reynolds, Ripley, St. Charles, St. Francois, St. Louis, Shannon, Stoddard, Stone, Taney, Vernon, Wayne, Webster, Wright. NEW JERSEY: Burlington, Camden, Gloucester, Hunterdon, Middlesex, Ocean, Salem. NEW YORK: Nassau. NORTH CAROLINA: Cherokee, Cumberland, Edgecombe, Harnett, Henderson, Hoke, Orange, Rowan, Swain, Wayne. OKLAHOMA: Caddo, Choctaw, Comanche, Johnston, McCurtain, Payne, Woods. PENNSYLVANIA: Bedford, Buck, Lancaster, Montgomery, Philadelphia, Schuylkill, York. SOUTH CAROLINA: Aiken, Anderson, Dillon, Georgetown,

Laurens, Oconee, Pickens. TENNESSEE: Bledsoe, Blount, Campbell, Carroll, Cheatham, Cocke, Coffee, Cumberland, Davidson, Fayette, Franklin, Grainger, Hardeman, Henderson, Hickman, Madison, Marion, McNairy, Montgomery, Morgan, Rhea, Roane, Rutherford, Scott, Sevier, Van Buren, Warren, Wayne. TEXAS: Bastrop, Bowie, Brazos, Dallas, Fayette, Harris, Lee, Nacogdoches, Parker, Travis, Walker, Waller. VIRGINIA: Bedford, Smyth. WEST VIRGINIA: Jackson, Jefferson, Lincoln, Summers, Wyoming.

Stylosanthes fruticosa (Retz.) Mohlenbrock. — Through the suggestion of Dr. J. Léonard of Laboratoire de Botanique Systématique, Bruxelles, additional specimens of this entity were examined from Africa and the East Indies with the result that two species should be recognized, instead of only *S. fruticosa*. African material, with loment beaks 1.5-3.0 mm. long and with evenly pubescent stems, should be known as *Stylosanthes mucronata* Willd. East Indian material, with loment beaks 3.5-4.0 mm. long and with unilaterally pubescent stems, should be called *Stylosanthes fruticosa* (Retz.) Alston.

The nomenclatural treatment follows:

Stylosanthes mucronata Willd. Sp. Pl. 3: 1166. 1800, ex char.

Stylosanthes bojeri Vog. in Linnaea 12:68. 1838, ex char.

Stylosanthes aprica Span. in Linnaea 15:192. 1841, ex char. (T: Burke & Zeyher 404).

Stylosanthes setosa Harv. in Harv. & Sond. Fl. Cap. 2:227. 1862, ex char.

Stylosanthes flavicans Baker in Oliv. Fl. Trop. Afr. 2:156. 1871. (T: Kotschy 425).

Known in Africa from Abyssinia, Angola, Kenya, Madagascar, Mozambique, Nigeria, Senegal, Southern Rhodesia, Sudan, Tanganyika, and the Union of South Africa.

Stylosanthes fruticosa (Retz.) Alston in Trimen, Handb. Fl. Ceylon 6:77. 1931.

Hedysarum hamatum acc. Burm. f., Fl. Ind. 167. 1768, non L.

Arachis fruticosa Retz., Obs. Fasc. 5:26. 1791.

Known from Ceylon, East Indian islands, and southern India.

Stylosanthes ingrata Blake in Proc. Biol. Soc. Wash. 39:51. 1928. (T: *S.J. Record* s.n.). — Through an oversight, *S. ingrata* was listed in synonymy under *Stylosanthes guyanensis* ssp. *guyanensis* by Mohlenbrock (1957), with the statement that it is without fruit. On the contrary, mature fruits are known which place *S. ingrata* phylogenetically near *S. montevidensis*.

Stems herbaceous, usually branched from the base, to 60 cm. long, puberulent, becoming glabrate below. Leaflets lanceolate, acute, with a subulate tip, glabrous or nearly so on both surfaces, mostly 1-nerved; terminal leaflet to 20 mm. long, 4 mm. broad; petioles 4-7 mm. long, puberulent to glabrous, the rhachis 1-3 mm. long; sheath of the stipules usually slightly longer than the teeth, strigose or occasionally with

a few bristles. Spikes linear-oblong, to 10 mm. long, 5- to 8- flowered; outer bracts trifoliolate, the inner unifoliolate, the sheath usually strigose, sparsely bristly, slightly longer than the teeth, 5- to 7-nerved; outer bracteole 1, oblong, to 4.0 mm. long, ciliate near the apex; axis rudiment none; inner bracteoles 2, 2.0-2.5 mm. long. Calyx tube to 3.5 mm. long, the lobe 1.5-2.5 mm. long. Standard obovate, scarcely clawed, to 8 mm. long; wings auriculate below and shortly appendaged within; keel petals falcate. Loment 5-6 mm. long, 1.5-2.0 mm. broad, very faintly reticulate; only the upper articulation fertile, 2.0-3.0 mm. long, glabrous, the lower abortive, pilose; beak slender, uncinat, 1.0-1.5 mm. long, pilosulous or nearly glabrous, slightly more than half as long as the upper articulation.

Known only from the type collection from Vaca Falls District, British Honduras, collected by S. J. Record in February, 1926, and deposited in the U. S. National Herbarium.

Stylosanthes suborbiculata Chiov. Ann. di Bot. 13:381. 1915. (T. Paoli 239!). — At the time of "A Revision of the Genus *Stylosanthes*," the writer stated (1957) under Excluded Species on page 347 that the type for *S. suborbiculata* Chiov. had not been seen and therefore was excluded from the systematic treatment.

Since that time, the type, which is on deposit in FI, has been studied, and *S. suborbiculata* proves to be a distinct species.

Stems herbaceous to somewhat woody at the base, much branched, spreading to suberect, to 40 cm. long, glabrous or puberulent, at least when young. Leaflets suborbicular, obtuse to slightly retuse at the apex, the terminal to 6 mm. long and 5 mm. broad, the lateral slightly smaller, glabrous on both surfaces, with 3-4 pairs of prominent veins; petioles 3-5 mm. long, glabrous to puberulent, the rhachis 1-2 mm. long; stipular sheaths 5-8 mm. long, 3- to 5-nerved, sparsely setose, the subulate teeth 2-4 mm. long. Spikes narrow, 5-8 mm. long, 2- to 5-flowered; outer bracts trifoliolate, inner bracts unifoliolate, the sheaths stipuliform; outer bracteole 1, 2.5-3.0 mm. long, ciliate near the tip; axis rudiment none; inner bracteole 1, 2.0-2.5 mm. long, ciliate. Calyx tube 2-3 mm. long, the lobes 2-3 mm. long, ciliate. Standard suborbiculate, 4-6 mm. long; wings 3-5 mm. long, auriculate, spurred within at the base; keel petals 3-4 mm. long, falcate. Loment faintly reticulate, 2.0-2.5 mm. broad; only the upper articulation of the loment fertile, 2.5-3.0 mm. long, glabrous; beak uncinat or nearly circinate, 2.5-3.0 mm. long.

This species is known only from the type collection of Paoli (#239) from Somaliland.

A NEW SPECIES FROM BRITISH GUIANA. — While studying a recent set of collections of *Stylosanthes* from the United States National Herbarium, a heretofore undescribed species from British Guiana was discovered. It belongs to Section *Stylosanthes*.

Stylosanthes suffruticosa Mohlenbrock, sp. nov.

Herba suffruticosa erecta ad 1 m. alta caulibus ramosis glabris vel puberulis tuberculato-setosis. Foliola elliptico-lanceolata supra glabra subtus parce punctulata glabra vel setosa nervis 3-5 — gemmatis; foliolo terminali ad 10 mm. longo, 2.5 mm. lato; foliolis lateralibus ad 8 mm. longis, 2.5 mm. latis; petiolo 3-5 mm. longo glabro vel puberulo; rhachide 0.5-1.5 mm. longa; stipulae striatae vagina 3-6 mm. longa setosa vel tuberculato-setosa vel glabrata processibus subulato-mucronatis setosis 2-4 mm. longis. Spicae densae oblongoideae floribus 3-10; bracteis unifoliolatis vel trifoliolatis stipuliformibus vagina puberula vel tuberculato-setosa 3-6 mm. longa nervis 5-7; bracteola exterior 1, 2.0-3.5 mm. longa apice ciliata; axis rudimento ad 4 mm. longo, villosa; bracteola interior 1, 2.0-3.5 mm. longa apice ciliata. Calycis tubus 3-5 mm. longus lobis 1.5-2.5 mm. longis. Corolla lutea; vexillo suborbiculato 4.0-6.5 mm. longo; alis falcatis 3.0-4.5 mm. longis; carina 3.0-4.5 mm. longa. Lomentum circa 2 mm. latum valde reticulatum, articulo superiore 2-3 mm. longo puberulo, articulo inferiore 1.5-2.5 mm. longo villosa, rostro circa 2.0-2.5 mm. longo parce uncinato.

Stylosanthes suffruticosa is distinguished from *S. hamata* by its tuberculate bristles, from *S. tuberculata* by its two fertile articulations and its longer beak, and from *S. mucronata* of Africa by its smaller leaves and narrower spikes.

The specific epithet is derived from the subshrubby growth habit.

This species is known only from Lethem, Rupununi District, British Guiana.

BRITISH GUIANA: Rupununi: Lethem, *H. S. Irwin* 550 (US, holotype), 618 (US, paratype).

Additional locality records for other species of *Stylosanthes* follow:

S. angustifolia Vog. BRITISH GUIANA: Rupununi.

S. hamata (L.) Taub. UNITED STATES: Florida: Duval County.

S. viscosa Sw. UNITED STATES: Texas: Counties of Aransas, DeWitt, Kenedy, Nueces, Willacy. — SOUTHERN ILLINOIS UNIVERSITY, CARBONDALE.

LITERATURE CITED

- MOHLENBROCK, ROBERT H. 1957. A revision of the genus *Stylosanthes*. *Ann. Mo. Bot. Gard.* 44:299-355.

AN UNUSUAL HYBRID HELENIUM¹

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While botanizing in Missouri during 1957, I collected a most puzzling specimen of *Helenium*. Although it most closely resembled *H. flexuosum* Raf., it possessed at the same

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